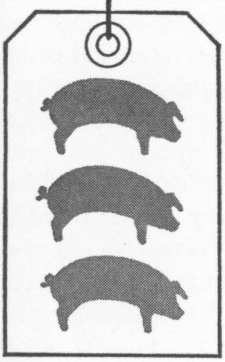
CIRCULAR 957

Making BUSINESS DECISIONS in FEEDER PIG OPERATIONS



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The authors wish to express their appreciation to the Interstate Producers Livestock Association (formerly the Illinois Producers Livestock Association), the Benton Livestock Association, and the Southeastern Livestock Association for their cooperation in obtaining data for the study on which this publication is based.

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Cooperative Extension Work in Agriculture and Home Economics: University of Illinois, College of Agriculture, and the United States Department of Agriculture cooperating. JOHN B. CLAAR, *Director*. Acts approved by Congress May 8 and June 30, 1914.

Highlights

This report was developed from a study of market planning and its role in assisting in area resource development. An initial phase was a careful analysis of possible regions and commodities for study. From this analysis a decision was made to study feeder pig marketing in an eight-county region in southeastern Illinois. However, the general relationships have applications to the feeder pig industry over a much wider area.

Changes in agriculture which have brought greater specialization and more emphasis on volume have supported a strong growth in the feeder pig industry in the Midwest. The eight-county region of southern Illinois has shown a sizable growth in the feeder pig business relative to other sections of the country. Yet, even with growth, it is estimated that this region produces less than 8 percent of the total feeder pigs purchased in the state.

Although the marketing channels for feeder pigs include several types of agencies and organizations for selling pigs, three firms were selected to illustrate the method of evaluation and to determine some basic price relationships. The study identified five problem areas of importance to nearly all firms engaged in selling feeder pigs. These problems are: quality, marketing efficiency, pricing accuracy, volume, and operation of facilities.

Quality of feeder pigs refers to a large number of factors. Buyers primarily are interested in factors related to profit, results of feeding, rate of gain, and health. In the operation of the present marketing facilities, especially of the auctions, it is difficult to identify such characteristics. Yet, until they are identified, producers will not be encouraged to make improvements.

An analysis of the auctions and contract programs shows variations in costs, but in total there is little difference in returns. Each method provides specific services which may be of advantage to individual producers.

An analysis of prices for 1962, 1963, and 1964 indicated little relationship between the price of feeder pigs and corn-hog ratio, price of corn, or future market prices of market hogs. Much of this may be explained by the small price variation of that time period. It is likely that in 1965 this relationship would have been more significant.

In reflecting demand for certain kinds of pigs, prices indicated differences for weight of pigs, for breed, and for size of lot.

Lower costs per unit usually occur with increased volume. This does not appear to be a great problem at present. In the auctions little

reduction in costs came as a result of a marketing volume above 2,000 head per sale. Both markets exceeded this number and with additional volume would have to increase the number of sales. If a new auction were established it would require at least 1,000 pigs to be competitive.

Each market firm has certain specific operational problems. Of particular importance are adequate management and labor.

A crucial factor to the future of the feeder pig industry is the relationship of returns from a farrow and finish versus a farrow or finish operation. Illinois Farm Bureau Farm Management Service records show that returns above feed costs are higher for complete hog operations than the combined returns above feed costs for separate farrowing and finishing operations. Yet, there are many factors in an individual situation that change this relationship. Particularly important is available labor and capital. Indications are that there is still opportunity for expansion in specialized feeder pig production and hog finishing operations.

Feeder pig producers have numerous decisions to make. Once the pigs are farrowed, the major decision is the weight at which to sell. All market channels indicate a decline in net returns for pigs at weights above 50 pounds.

The profit in feeding feeder pigs is primarily dependent on (1) the price of corn to be fed, (2) the price of butcher hogs when the pigs are finished and ready for market, and (3) the price of feeder pigs. Relationships among prices of these three factors result in a wide variation in returns. However, changes in these price relationships may be more than offset by the feeding efficiency (amount of feed per 100 pounds of gain) achieved with a particular group of pigs.

MAKING BUSINESS DECISIONS IN FEEDER PIG OPERATIONS

L. D. Hill and M. B. Kirtley[1]

Much of the increased growth of the specialized feeder pig industry in the Midwest may be attributed to increased demands on farmers' labor and capital. Smaller profits per unit and the difficulty of hiring suitable labor have encouraged farmers to specialize and mechanize. This in turn causes increased pressure for a larger volume over which to spread the overhead costs of the enterprise. By separating the farrowing operation from the finishing operation both producers and feeders can further mechanize their operations and use their skills and capital to better advantage.

The development of the farrowing and finishing operations on separate farms, and even in different geographical regions, requires a marketing system which will transfer ownership of the pigs from producer to feeder. As this marketing system increases in size and complexity, buyers and sellers require more detailed information on which to base production and marketing decisions. This publication provides information which will help buyers and sellers in making decisions. The study was conducted in an eight-county region[2] of southern Illinois, but is applicable to other producing areas as well. This region was selected for a broader study of economic development[3] in which it was determined that the feeder pig industry could play an important role.

Historical Production Trends in Southern Illinois

Evaluating opportunities to expand feeder pig production requires an analysis of production trends in the region under consideration. In the southern Illinois counties studied, the production of hogs has increased more since 1961 than in other areas of the state and more than in other states in the Midwest. Figure 1 shows that for southern Illinois, 1959-1961 production of hogs was 123 percent of the 1952-1961 average production, and southern Illinois' share of the United States

[1] Assistant Professor and Associate Professor, respectively, Department of Agricultural Economics.

[2] This region includes Clay, Richland, Marion, Jefferson, Franklin, Wayne, Hamilton, and Edwards counties. Edwards County was added after the study was under way and some of the charts are based on only seven counties.

[3] See L. D. Hill, "Market Planning for Resource Development in an Eight-County Region of Southern Illinois," University of Illinois, College of Agriculture, Special Publication 10, 1966.

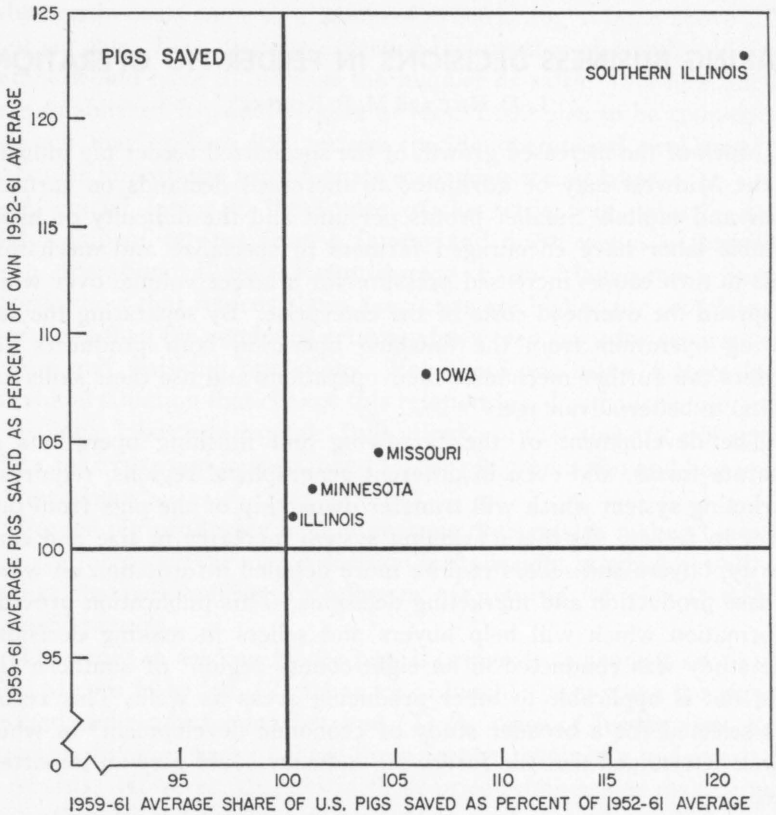

Fig. 1. — Regional changes in average production of pigs saved with respect to percentage change in share of the U.S. total.

total hog production in 1959-1961 was 121 percent of its average share in 1952-1961 — a rate of expansion greater than that of other major hog producing regions in the United States. The seven-county region has continued to expand production even in years when lower prices have caused a decline in farrowings in other states. This expansion relative to other areas is partly explained by Figure 2. The number of pigs saved per litter has been consistently higher in the seven counties than in competing states and Illinois crop reporting districts, with the exception of Minnesota in 1963. This suggests that the southern Illinois region has been producing hogs at a lower cost than some of the competing states.

While Figures 1 and 2 have reference to all hogs produced rather than numbers of feeder pigs, surveys conducted in the area indicated

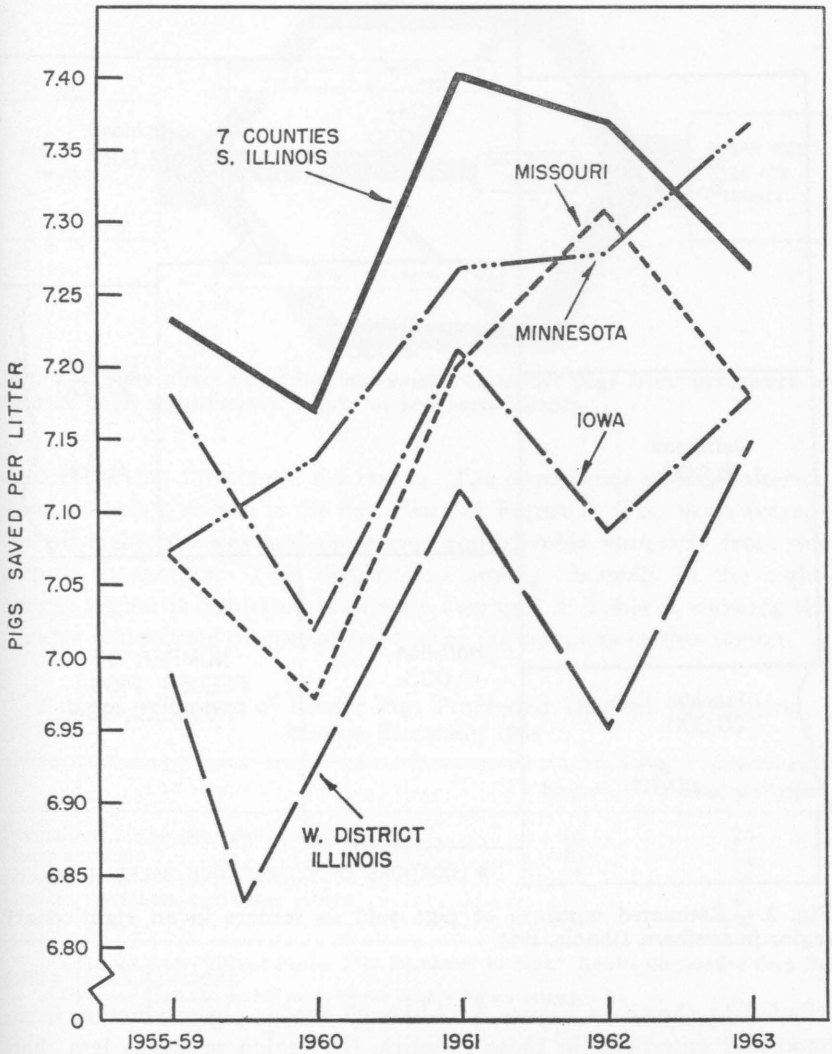

Fig. 2. — Pigs saved per litter in selected states and Illinois counties, 1955-1959 average and 1960-1963 annual.

that production and sales of feeder pigs have been following a very similar pattern. Estimates of the numbers of feeder pigs sold in the region[1] totaled approximately 127,000 head in 1963. These were dis-

[1] Edwards County was added to the region at this point in the study and is included in the data presented in the remainder of this publication.

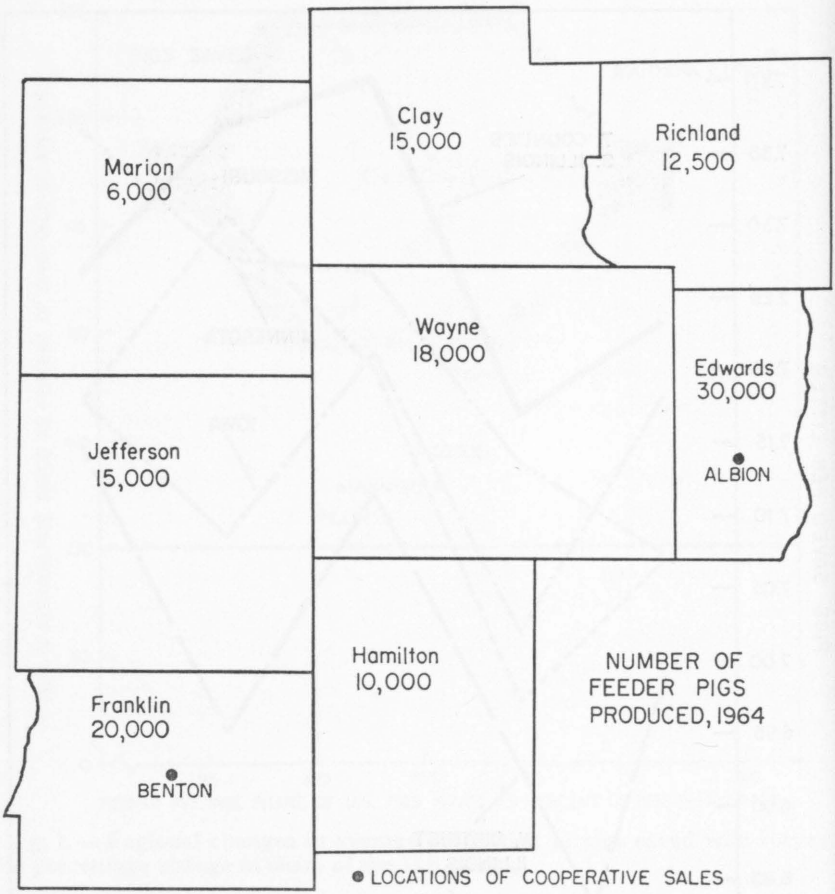

Fig. 3. — Estimated numbers of pigs sold as feeders in an eight-county region in southern Illinois, 1964.

tributed as shown in Figure 3. Although feeder pig production is an important enterprise in these counties, the region produces less than 8 percent of the total number of feeder pigs purchased in the state.

Market Facilities in Southern Illinois

Recommendations for changes in the marketing system are dependent upon the facilities that are presently operating in the region. To obtain information on the available facilities in southern Illinois, a survey was made with the assistance of the farm advisors in the counties. The results indicated that there were 2 cooperative auctions, 3 general livestock sales, 1 agency offering producer contracts, and 40

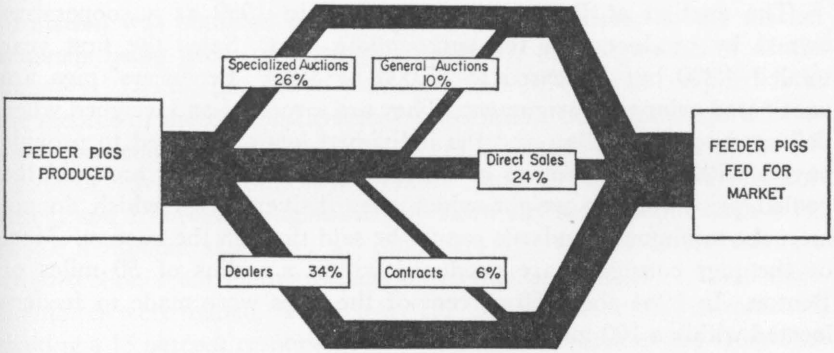

Fig. 4. — Flow chart depicting movement of feeder pigs from producers to feeders in an eight-county region of southern Illinois.

dealers serving farmers of the region. The importance of these alternative channels is shown in the flow chart of Figure 4. This is an average for all eight counties and there was considerable variation from one county to another. This distribution among channels in the eight-county region is compared with state averages in Table 1, showing the greater importance of specialized feeder pig auctions in this region.

Table 1. — Percent of Feeder Pigs Purchased Through Alternative Market Channels, 1964

	State[a]	8-county region[b]
Specialized feeder pig sales	16	26
Other auctions	25	10
Direct sales	33	24
Dealers, contracts, and other sellers	26	40
Total	100	100

[a] Obtained from "Illinois Feeder Pigs Purchased in 1964," Illinois Cooperative Crop Reporting Service, Springfield.
[b] Obtained from the survey made by the county farm advisers.

While the other marketing facilities have been important and will continue to serve the industry, only the contract agency and the specialized feeder pig auctions were included in the study due to the lack of adequate data and the less formal structure of direct sales, dealers, and general auctions. The three marketing facilities included in this study were the Benton Livestock Association, the Southeastern Livestock Association and the Interstate Producers Livestock Association.[1]

[1] These three associations are, respectively, a cooperative feeder pig auction at Benton, a cooperative feeder pig auction at Albion, and a contracting agency affiliated with Illinois Agricultural Association.

The auction at Benton was organized in 1959 as a cooperative owned by producers in the surrounding area. Sales the first year totaled 4,800 but increased to 25,000 by 1965. Producers' pigs are vaccinated prior to consignment. They are inspected and weighed when delivered to the auction and the individual lots are pooled to provide buyers with larger numbers of uniform pigs. Producers are paid the pooled price for the weight which they deliver. Pigs which do not meet the minimum standards cannot be sold through the auction. Most of the pigs consigned are produced within a radius of 50 miles of Benton. In 1964 about 50 percent of the sales were made to feeders located within a 100-mile radius of Benton.

The Southeastern Livestock Association was organized in 1961 and is operated in a manner similar to the auction at Benton. The number of pigs sold increased from 4,500 in 1959 to 23,000 in 1965. Producers are concentrated slightly closer to the sale and a larger proportion of the pigs go to local feeders than in the Benton sale. Marketing charges in both auctions are based upon a percentage of the gross receipts.

The Interstate Producers Livestock Association signs contracts with producers prior to farrowing. Producers agree to sell their pigs through the Association in exchange for a guaranteed minimum price. Weekly prices are established by the manager, and producers deliver their pigs to an assembly point where they are inspected and sorted. They are then delivered to buyers who have previously placed their orders with the Association manager. Marketing charges are on a per head basis and the Association acts only as a selling agent without taking ownership. The Association also provides management assistance through a staff of fieldmen, finances purchases of breeding stock for producers, and assists in selection of breeding stock to maintain quality standards.

In 1965 approximately 16,000 sows were covered by contracts with producers located throughout the southern half of the state. The primary concentration has been in the extreme southwest counties with relatively few producers in the eight counties being studied. Few pigs are purchased by local feeders. Buyers are located primarily in the heavy grain areas of northern Illinois.

Analysis of Industry Problems in Southern Illinois

As a basis for evaluating alternative market channels, the problems of the industry may be analyzed by techniques such as cost comparisons among facilities, statistical relationships of performance, and a survey of buyers and sellers.

The characteristics of buyers and producers of feeder pigs in southern Illinois were investigated through a mail questionnaire. In-

formation was obtained on their production practices, on the market channels being used, on changes in volume, and organization of the industry. The mailing list of producers and buyers was compiled from the records of the Benton Livestock Association, the Southeastern Livestock Association, the Illinois Producers Livestock Association, the Division of Livestock Industry (Illinois State Department of Agriculture), and from names submitted by farm advisers. While such a list is not a random sample of all producers and buyers, it represents a cross-section from the major market channels. A total of 1,310 questionnaires were mailed. There were 192 usable questionnaires returned, making a 15 percent response. From these questionnaires and from data obtained from the three marketing facilities, five major problem areas were identified in the feeder pig industry of the eight-county region: (1) quality, (2) marketing efficiency, (3) pricing, (4) volume, and (5) operation of facilities. The details of each of these problem areas are presented in the following pages. While the importance of these problem areas may differ in other regions, it appears that they are relevant considerations throughout the industry.

Quality

Quality as related to feeder pigs may refer to many different characteristics. Feeder pig grades are determined on the basis of conformation, freedom from disease, and general appearance. However, feeders purchasing these pigs are less interested in the appearance of the animals and more concerned with their performance in the feedlot. Rate of gain, feeding efficiency, and general health are quality factors less easily identified but of greater interest to the feeder. The packer is interested in still another quality measure — the carcass cut-out value of the finished pig. All of these factors are a consideration in an analysis of quality in the industry even though many of them cannot be measured directly.

When asked to list their chief complaint about the market facility which they had been using, the majority of buyers, regardless of the source of their purchases, listed quality of the pigs.[1] The quality factor most frequently mentioned was the age-weight relationship and the difficulty of determining the age of pigs in the sale ring. Minimum quality standards are specified in both auctions and in the contract between producers and IPLA. These standards are based primarily upon inspection at the time of purchase, and any pigs not meeting the minimum are rejected. Additional quality control is exercised by IPLA

[1] Concern over quality may have been over-emphasized since dissatisfied buyers are more likely than satisfied buyers to answer a mail questionnaire.

through restrictions on breeding stock and supervision of production practices by fieldmen and a premium price for SPF pigs. SPF is an abbreviation for "specific pathogen free" and is used to indicate pigs meeting rigorous disease-free restrictions including original breeding stock delivered by Caesarean section under aseptic conditions.

Other quality factors such as management history and performance records of breeding stock are seldom identified, and buyers are unable to indicate their preferences even though they may be willing to pay a premium for higher-quality pigs. Both feeders and producers recognize that there are differences between groups of pigs in feeding efficiency, rate of gain, and cut-out characteristics of the finished animals. These differences affect the value of the feeder pig to the buyer, but no opportunity is provided for the market to reflect these differences to the producer. These characteristics are difficult to evaluate by visual inspection, and additional information on breeding and management history and production tests could improve market performance. Producers will be slow to improve quality above present levels until quality becomes a basis for price determination.

Table 2. — Costs of Marketing Feeder Pigs in Five Alternative Market Facilities, 1964 (Dollars per Hundredweight)

Function	Cost to producers	Cost to buyers	Cost to the market system	Total cost
		Albion Auction		
Assembly, grading, sorting[a]	0	0	.60	.60
Price determination[b]	0	0	.15	.15
Information and communication[c]	0	0	.10	.10
Transportation[d]	.65	1.31	0	1.96
Livability guarantee[e]	0	1.17	0	1.17
Financing of production[f]	1.90	0	0	1.90
Vaccination	2.19	0	0	2.19
Commission charge[g]	1.03[i]	0	−1.03	0
Allocated to other functions[h]	....	....	.18	.18
Total	5.77	2.48	0	8.25
		Benton Auction		
Assembly, grading, sorting[a]	0	0	.62	.62
Price discovery[b]	0	0	.16	.16
Information and communication[c]	0	0	.19	.19
Transportation[d]	.73	1.56	0	2.29
Livability guarantee[e]	0	.90	0	.90
Financing of production[f]	1.78	0	0	1.78
Vaccination	2.19	0	0	2.19
Commission charge[g]	1.16[i]	0	−1.16	0
Allocated to other functions[h]	....	....	.19	.19
Total	5.86	2.46	0	8.32
		Interstate Producers Livestock Association		
Assembly, grading, sorting[a]	0	0	.56	.56
Price discovery[b]	0	0	.12	.12
Information and communication[c]	0	0	.07	.07

Table 2. — Continued

Function	Cost to producers	Cost to buyers	Cost to the market system	Total cost
	Interstate Producers Livestock Association			
Transportation[d]	.56	0	1.50	2.06
Livability guarantee[e]	0	.91	.07	.98
Financing of production[f]	1.78	0	.12	1.90
Vaccination	2.19	0	0	2.19
Commission charge[g]	3.75[k]	0	−3.75	0
Allocated to other functions[h]	....	....	1.31	1.31
Total	8.28	.91	0	9.19
	Wisconsin Feeder Pig Marketing Coop.			
Assembly, grading, sorting[a]	0	0	.92	.92
Price discovery[b]	0	0	.17	.17
Information and communication[c]	0	0	.40	.40
Transportation[d]	0	0	2.13	2.13
Livability guarantee[e]	0	.61	.14	.75
Financing of production[f]	1.90	0	0	1.90
Vaccination	0	2.19	0	2.19
Commission charge	0	0	0	0
Allocated to other functions[h]	....	....	1.25	1.25
Total	1.90	2.80	5.01	9.71
	Wisconsin Feeder Pig Tele-auction (budgeted costs for 500 head per sale)			
Assembly, grading, sorting[a]	0	0	.44	.44
Price discovery[b]	0	0	.27	.27
Information and communication[c]	0	0	.39	.39
Transportation[d]	.69	1.43	0	2.12
Livability guarantee[e]	0	.67	.08	.75
Financing of production[f]	1.90	0	0	1.90
Vaccination	0	2.19	0	2.19
Commission charge[l]	....	0	....	0
Allocated to other functions[h]	....	....	.03	.03
Total	2.59	4.29	1.21	8.09

[a] The cost of assembly includes labor charges for sorting and penning hogs, depreciation on capital equipment used for sorting and penning, and 50 percent of the overhead charges.

[b] The cost of price determination in the auctions includes the cost of the auctioneer plus 25 percent of the overhead. For IPLA, the cost of price determination included an allocation of management and office labor involved in setting the weekly price.

[c] The information and communication charge was based upon the advertising expense of the firm plus 10 percent of the total overhead costs.

[d] Transportation cost varied with the average distance pigs were moved. Estimates were made for the auction and allocated to buyers and sellers. In IPLA, buyer transportation is paid by the organization and actual cost figures were used.

[e] The total cost for livability guarantee was computed from the questionnaire data on the basis of average death loss and average prices paid in each channel. This total charge was allocated to the buyer where no guarantee was provided. IPLA cost data included reimbursement to buyers for loss under provisions of the contract, and this charge was subtracted from the total death loss to obtain a figure for cost to producers.

[f] Financing production was assumed to cost the same in each market channel and was computed from farm management cost data. The total charge is 6 percent interest on investment in buildings, equipment, breeding stock, and feed. In the case of IPLA, breeding stock may be financed at 5 percent through the organization and the remaining 1 percent was charged to the market system.

[g] The commission charges per hundredweight were based upon average weights and prices in each market channel. The negative entry under market costs is a balance factor to prevent double counting in the totals. It is paid by the producer to the market agency and is therefore a cost to the producer and an income (i.e., negative cost) to the market agency.

[h] The category of costs labeled "Allocated to other functions" is a residual which accounts for the remaining portion of the marketing charge.

[i] Based upon 1964 average price of $24.44/cwt. and average weight of 59.3 lbs. Price adjusted to 40 lb. base = 29.39/cwt. Commission charge of 3½ percent of adjusted price is $1.03 per hundredweight.

[j] Based upon 1964 average price of $23.97/cwt., and average weight of 62.2 lbs. Price adjusted to a 40 lb. base = $29.18/cwt. Commission charge of 4 percent of adjusted price is $1.16/cwt.

[k] Based upon a 40 pound average weight and a marketing charge of $1.50 per head.

[l] Commission charge has not yet been determined.

Marketing efficiency

The efficiency of a marketing system depends upon the operation of the individual facilities which perform the marketing functions, and upon the relationship of these facilities to each other. When several marketing firms are operating in an industry, a comparison of costs and returns provides a means of evaluating the adequacy of their performance.

The present marketing system for feeder pigs in southern Illinois includes several market channels with considerable variation in volume (see Figure 4). In order to provide a more detailed comparison, the marketing process was divided into specific functions and a cost comparison among the market facilities was made for each function as shown in Table 2. In addition to the three facilities operating in southern Illinois, a Wisconsin co-op and a proposed tele-auction were included in the comparison. Totals from Table 2 were used in Tables 3 and 4 to compare the various market facilities on the basis of net returns to producers, total costs to buyers, and total cost of marketing. Prices are not strictly comparable between Illinois and Wisconsin and no inferences should be drawn as to the relative profitability of the enterprises in the two states.

Table 3. — Total Cost of Selected Marketing Functions (Dollars per Hundredweight) to Producers and Buyers of Feeder Pigs in Five Alternative Market Facilities, 1964

Market facilities	Cost to producer	Cost to buyer	Net cost to the market	Total cost
Albion	5.77	2.48	.00	8.25
Benton	5.86	2.46	.00	8.32
IPLA	8.28	.91	.00	9.19
Wisconsin	1.90	2.80	5.01	9.71
Tele-auction	2.59	4.29	1.21	8.09

Table 3 indicates that in Illinois the contract market results in the highest cost to the producer, lowest cost to the buyer, and highest total cost of marketing. When prices paid and received are included in the analysis, as in Table 4, the contract facility provides producers with the highest net returns and buyers with the highest cost. Quality differences have not been included, and there may be non-economic factors which would alter the cost-price relationships. The costs and net returns among these facilities do not differ greatly. The differences shown in these tables are relatively small and it must be concluded that

Table 4. — Net Returns to Producers and Costs to Buyers (Dollars per Hundredweight) in Five Alternative Market Facilities for Feeder Pigs, 1964[a]

Market facilities	Producer returns			Buyer costs		
	Average price received (1964)	Cost of marketing	Net returns	Average price paid	Cost of marketing	Total cost
Albion	29.39	5.77	23.62	29.39	2.48	31.87
Benton	29.18	5.86	23.32	29.18	2.46	31.64
IPLA	32.86	8.28	24.58	32.86	.91	33.77
Wisconsin	22.69[b]	1.90	20.79[b]	27.70	2.80	30.50
Tele-auction	26.49[c]	2.59	23.90	27.70[c]	4.29	31.99

[a] Costs and prices are computed for a 40-pound pig. If it is desired to adjust this to other weights, decrease gross prices according to the figures shown in Table 8.
[b] Prices and net returns include $.39 per hundredweight producer refund paid in 1964 and $.25 for veterinary services valued at cost.
[c] Prices paid were assumed to be the same as those in the Wisconsin cooperative since no sales have yet been made. Prices received were computed by subtracting net cost to the market ($1.21) from prices paid.

no one market system has a great advantage in efficiency of operation. Each is performing a set of services for which there is a demand. A similar evaluation of facilities in other regions can be a useful guide for making improvements in the existing marketing system.

Pricing

The price paid for a particular lot of feeder pigs is affected by four things: the average weight, the number of pigs in the lot, the breed characteristics displayed by the pigs, and the uniformity of the pigs within the lot. Both the producer and the marketing agency can influence these factors. The practice of pooling pigs has been very effective in increasing lot size and uniformity of the pigs sold. Both producers and marketing agencies are concerned with the effect of these two factors on price, for as lot size is increased uniformity is often decreased. A statistical analysis of sales data was used to indicate the effect of lot size upon the prices paid for feeder pigs in the three facilities included in the study. The results shown in Table 5 indicate a general relationship which would hold true for most feeder pig sales in the Midwest. The figures in the table indicate the increased price resulting from an increase in lot size from a base of 1-25 head.

In the survey buyers indicated preferences for certain lot sizes, with generally higher prices being paid as the number of head per lot increased. The price differentials for both auctions follow the same general pattern as the number of head per lot increases, except for the 51-75 head group in Albion. The demand for this size lot is quite

Table 5. — Price Increases (Dollars per Hundredweight) Associated With Increased Lot Sizes in Each of Three Markets for Feeder Pigs

Number of head per lot	IPLA	Albion auction	Benton auction
1–25	base	base	base
26–50	0	$1.12	$1.40
51–75	0	2.30	1.80
76–100	0	1.33	1.82
101–500	0	2.40	2.25

high relative to other sizes and compared with the Benton auction. This reflects a difference in buyer composition, with the buyers at Albion being generally small local feeders while the Benton auction serves a number of larger feeders from northern Illinois and other states. Sales data obtained since this analysis was made indicate that the Albion sale is now attracting a number of larger feeders and the premium for larger lots of pigs will probably increase. Prices under the IPLA contract do not distinguish among breeds or lot sizes and no data were available on these factors for dealer sales or direct transactions. The relationship between lot size and price is important to the operation of feeder pig sales.

Although the question of the weight at which to sell the pigs is partly controlled by the date of the sales, producers often have the alternative to sell at various weights, particularly if there is more than one sale facility within a given geographical region. It is therefore important to determine the effect of the average weight of pigs in a lot on the price received for that lot. Table 6 shows the decrease in prices at each of the three sale facilities in this study, resulting from an increase in the average weight. The price changes in the two auctions are very similar. The weight discount used by IPLA is from $.75 to $2.20 per hundredweight greater than the discounts shown for the auctions. The survey of feeders indicated that 38 percent of the respondents preferred to buy a 40- to 50-pound feeder pig. This fact is recognized in the IPLA contract and their discount schedule for the heavier pigs. Actually, none of the heavier weights are moved through the IPLA facilities. The average weight at the auctions for 1964 was 61 pounds with a range from 30 pounds to 180 pounds, indicating that a market exists for a variety of weights but at a substantial price reduction.

The survey of buyers of feeder pigs and data from the auctions indicated a buyer preference for certain breeds of hogs over others.

Table 6. — Price Decreases (Dollars per Hundredweight) Associated With Selected Weight Groups in Each of Three Markets for Feeder Pigs

Weight group	IPLA[a]	Albion auction[b]	Benton auction[b]
30–40	base = 40 lb.	base adjusted to 40 lb.	base adjusted to 40 lb.
41–55	$- 3.28	$- 2.38	$- 2.53
56–70	- 7.43	- 6.37	- 6.34
71–85	-10.75	- 9.97	- 9.40
86–100	-13.00	-10.63	-11.03
101–170	-14.61	-12.41	-13.08

[a] IPLA weight discounts are based upon the 1962, 1963, and 1964 average base price of $34.69. Each pound above the base weight is purchased at 15 cents per pound up to a total weight of 60 pounds. Each pound above 60 is purchased at 10 cents per pound. The price differentials shown were computed as the change from the base to the midpoint of each weight range.

[b] Weight discounts at the auctions were estimated statistically from sales data. The weight ranges were assumed to be represented by the midpoints and were adjusted to a 40 pound base for comparability. All values were statistically significant at the 1 percent level.

The economic basis for this need not be argued, but the preference exists and can be translated into price differences. A statistical analysis of 822 sale transactions at the auctions indicated that pigs showing Hampshire characteristics brought $.63 per hundredweight more than the average of all pigs (statistically significant at the 1 percent level). While other breed classifications indicated price differentials in particular sales, these differences were not consistent and no generalizations could be made from the data available for breeds other than Hampshire.

Volume

All the marketing facilities are concerned with problems of volume. The overhead costs associated with most marketing facilities make per unit cost highly responsive to changes in volume. Based upon a study of costs at the Benton and Albion sales, operating efficiency reaches a peak at a volume of about 2,000 head per sale.[1] In 1964 the auction at Albion averaged 2,460 pigs per sale and the auction at Benton averaged 2,240. Limitations of capacity in existing facilities often suggest that further increases in volume must be handled by more sale days rather than larger volume per sale.

The results of this study indicate that a volume of at least 1,000 head per sale would be necessary to justify construction of new facilities, even with minimum capital investment and 10 to 12 sales per year. There are many alternatives to new construction, however, and such a decision should be based upon a comparison of unit costs for

[1] These costs are discussed in more detail in L. D. Hill, "Market Planning for Resource Development in an Eight-County Region of Southern Illinois," University of Illinois, College of Agriculture, Special Publication No. 10, 1966.

the different facilities and upon the expected volume of pigs during future years. If additional numbers of feeder pigs are needed to make the facility feasible, it must be recognized that there are two important limitations to production expansion. The first is the limit placed by demand. As the number of pigs sold in a region is increased there is a tendency for feeder pig prices to decline. The second limitation results from the lack of ability or desire on the part of producers to increase production. In the survey of southern Illinois producers, one-third of the respondents to the questionnaire indicated that available labor was a limiting factor in expansion. Production can be increased only up to this limit.

It is difficult to estimate what the future demand for feeder pigs will be, but continued expansion and specialization of hog feeding operations will provide a growing market for feeder pigs. An estimate of the demand for feeder pigs at the two auction facilities was made through a statistical analysis of the price-quantity relationships from 67 sales. With quantity defined as a three-month moving average of sale volume in the local auctions, the analysis indicated a price decrease of 17 cents per hundredweight for a 100-head increase in average volume. Stated in another way, increasing average volume per sale by about one-third would result in a price decrease of about $1.00 per hundredweight. A policy of large-scale expansion cannot be pursued without recognizing the limitations of demand in the local area and taking advantage of the opportunities for broadening the market geographically.

Operational problems

In addition to the industry-level problems that have been discussed, there are many problems at the firm level for all the market facilities under consideration. Organizing and operating the facilities on a day-to-day basis requires knowledge and analysis of relationships at the firm and industry levels. While these problems become specific to each market facility, there are some generalizations which are relevant regardless of the organization of the market system.

1. Maximum returns and efficiency require accurate identification of demand and adjustment of the product accordingly. An example of this is grouping pigs into the lot sizes desired by the buyers. The demand for lots of 51-75 pigs at Albion differs from the demand for this same lot size at Benton.

2. Adequate safeguards are needed to avoid undue risk and losses to the marketing firm. This includes insurance, bonding, and financing arrangements.

3. If quality and livability guarantees are to be effective, individual producers must be held responsible for the quality and condition of the pigs which they sell.

4. The organizational structure should provide adequate management and labor so that continuity of operation is not dependent upon any one individual.

5. Adequate physical facilities must be provided for operation of the sale at a cost that is competitive with alternative marketing channels.

Management Decisions in Farrowing and Finishing Feeder Pigs

The problems discussed to this point have involved producers, buyers, and market agencies, and solutions would require coordinated action by many individuals. However, there are other marketing decisions which must be made independently by individuals, producers and feeders. These decisions include a choice of breed, number to farrow or feed, weight to buy or sell, seasonal distribution, and the market channel to use. Before turning to these operational considerations, a decision must be made to follow a farrow-to-finish program or to specialize in either a farrowing operation or a feeding operation.

Farrow and finish versus farrow or finish

Separation of the farrowing and finishing operations in the hog industry is based upon several different factors. Profitability plays an important role in this decision, influencing many producers to change their program as price levels fluctuate. Illinois Farm Bureau Farm Management Service records show that returns above feed costs are higher for complete hog operations than the combined returns above feed costs for separate farrowing and finishing operations.[1] The difference in returns reflects the cost of transportation, extra marketing costs, and higher death losses that result from the transfer of weanling pigs from one farm to another. There are factors other than returns above feed costs which enter into this decision. A farrowing operation generally requires more labor and less capital per head or per dollar of gross income than does a finishing operation, although this capital-labor ratio varies among producers depending upon the extent of mechanization and investment in fixed facilities. Very few of the farrowing operations are adaptable to mechanization or automation. The optimum size of farrowing operations is relatively small, and

[1] R. A. Hinton, "Hogs: Produce and Finish, Produce or Finish," *Farm Management Facts and Opinions,* No. 64-19, Nov. 2, 1964, Department of Agricultural Economics, University of Illinois.

larger operations often result in higher costs because of problems of disease and the need for close supervision during farrowing.

In contrast, the feeding operation is primarily a capital-using one requiring relatively large quantities of grain per head and considerable investment in livestock. Many of the operations can be mechanized and automated, and supervision of the hogs on an individual basis is not necessary. Although margins per head may be small it is possible to maintain a large volume through the facilities and keep returns to labor competitive with alternative uses. Larger volumes usually result in decreased costs per head and the optimum size of operation is quite large.

These comparisons suggest that a specialized farrowing enterprise would be found on farms where the management, labor, and capital resources are different from the resources found on farms specializing in finishing feeder pigs. This supposition was supported by the analysis of the questionnaires. Table 7 summarizes the response to the question sent to buyers: "Why do you purchase feeder pigs rather than farrow them yourself?" and the question to sellers: "Why do you sell feeder pigs rather than finish them yourself?"

Table 7. — Reasons Given by Survey Respondents for Separating the Farrowing and Feeding Operations in the Hog Industry

Reason	Producers[a]	Feeders[a]
	(percent)	
Profitability	37	4
Labor and facilities not adequate or adapted	38	55
Limitations of management and labor skills	25	52
Feed requirements	38	0
Capital limitation	0	21

[a] Percentages for each group do not total 100 percent since many respondents indicated more than one reason.

Producers of feeder pigs indicated that at 1964 prices it was more profitable to sell their pigs as feeders than to finish them to market weight. Lack of feed and facilities was equally important in their decision. Only 4 percent of the feeders purchased their pigs because they felt it was more profitable than raising them. The majority of feeders did not farrow their own pigs because of a lack of labor and facilities and the limitations of their labor and management skills.

In addition to specialization among farms, there is also the question of specialization among areas resulting in even greater costs of marketing and transportation. Data are not readily available to fully evaluate

this regional specialization in Illinois, but it appears that historically prices for corn and feed have been higher and prices for butcher hogs lower in southern Illinois than in northern Illinois. These differences may result in net returns from a specialized industry that are quite comparable to net returns from an industry of farrow-to-finish operations, despite the higher death losses and marketing costs.

Costs and decisions of the feeder pig producer

Once the pigs are farrowed the marketing decisions of the producer are limited primarily to selecting the weight at which to sell the pigs.[1] Table 8 shows the expected prices and net returns at various weights for each of the three market channels. Prices were adjusted to a base month and year for an average breed and lot size. Price expectations were based upon the frequency of various adjusted prices in over 3,000 sale transactions from 1962-1964. The net receipts figure in the last row of Table 8 is the adjusted price less costs of marketing and production. The cost figures used in Table 8 were obtained from budget data in farm management studies, from the survey results, and from the marketing agencies. Although the level of prices may differ in other regions, the general relationships illustrated in the table would be applicable to most producers.

A comparison among the weight groups in Table 8 shows that in all market channels net returns decline at weights above 50 pounds, but at different rates in the different channels. The declining price per hundredweight and increasing costs of production result in relatively low margins at the heavier weights. Feeders are apparently unwilling to pay producers for the added cost of feeding the pigs to heavier weights. The difference in price per head between a 40-pound pig and a 75-pound pig is considerably less than the cost of the additional feed. A partial explanation of this is the implicit relationship between quality and size. With no adequate guarantee of weight for age or feed conversion efficiency, buyers are reluctant to buy 75-pound pigs which they frequently find are "tail-enders" held over from a previous sale or rejects from a previous purchase.

Feeder pig production is usually a continuing enterprise, and producers are faced with long-run decision choices as well as the short-run questions of market weight. Plans for future farrowing involve choices of breed, selling date, and number of head, as well as weight and

[1] The market channel is in a sense predetermined because contract participation requires prior commitment, and transportation cost prevents a producer from considering more than one of the auctions. Once the pigs are farrowed, weight and month of sale can no longer be determined separately.

Table 8. — Net Receipts From Feeder Pigs, by Weight, Sold in Three Market Outlets (1964 base)

	Average weight and range, pounds[a]					
	35.0 (25–40)	47.4 (41–55)	62.1 (56–70)	77.4 (71–85)	92.7 (86–100)	116.9 (over 100)
Albion: Gross receipts, costs of production and marketing, and net receipts						
Gross receipts per hundredweight[b]	**33.04**	**28.89**	**24.57**	**21.49**	**19.64**	**18.29**
Gross receipts per pig	**11.56**	**13.69**	**15.26**	**16.63**	**18.21**	**21.38**
Costs of production per pig[c]						
Feed[d]	4.48	6.08	7.97	9.95	11.93	15.05
Labor	.76	1.02	1.33	1.65	1.87	2.38
Marketing	.45	.54	.59	.65	.72	.84
Transportation[e]	.11	.11	.11	.11	.11	.11
Other	1.65	1.66	1.67	1.68	1.69	1.70
Total	**7.45**	**9.41**	**11.67**	**14.04**	**16.32**	**20.08**
Net receipts per pig	**4.11**	**4.28**	**3.59**	**2.59**	**1.89**	**1.30**
Benton: Gross receipts, costs of production and marketing, and net receipts						
Gross receipts per hundredweight[b]	**32.93**	**28.91**	**24.69**	**21.95**	**19.16**	**17.37**
Gross receipts per pig	**11.52**	**13.70**	**15.33**	**16.99**	**17.76**	**20.30**
Costs of production per pig[c]						
Feed[d]	4.48	6.08	7.97	9.95	11.93	15.05
Labor	.76	1.02	1.33	1.65	1.87	2.38
Marketing	.45	.53	.59	.66	.69	.78
Transportation[e]	.14	.14	.14	.14	.14	.14
Other	1.65	1.66	1.67	1.68	1.69	1.70
Total	**7.48**	**9.43**	**11.70**	**14.08**	**16.32**	**20.05**
Net receipts per pig	**4.04**	**4.27**	**3.63**	**2.91**	**1.44**	**.25**
IPLA: Gross receipts, costs of production and marketing, and net receipts						
Gross receipts per hundredweight[b]	**36.37**	**30.78**	**26.88**	**23.54**	**21.30**	**18.96**
Gross receipts per pig	**12.73**	**14.59**	**16.69**	**18.22**	**19.75**	**22.17**
Costs of production per pig[c]						
Feed[d]	4.48	6.08	7.97	9.95	11.93	15.05
Labor	.76	1.02	1.33	1.65	1.87	2.38
Marketing	1.50	1.50	1.50	1.50	1.50	1.50
Transportation[e]	.11	.11	.11	.11	.11	.11
Other	1.65	1.66	1.67	1.68	1.69	1.70
Total	**8.50**	**10.37**	**12.58**	**14.89**	**17.10**	**20.74**
Net receipts per pig	**4.23**	**4.23**	**4.11**	**3.33**	**2.65**	**1.43**

[a] Average weight was computed by averaging the weight at Albion and Benton in each weight range.

[b] Prices were adjusted to a base month and year and include a probability factor.

[c] Production costs were derived from data in R. A. Hinton, *Farm Management Manual*, AE-3792, Department of Agricultural Economics, University of Illinois, Urbana, Illinois, 1964.

[d] Feed costs are computed at a constant $.15 per pound of gain from 40 to 150 pounds.

[e] Average distance transported was obtained from farm advisers at the two sales and from the manager of IPLA: Albion, 15 miles; Benton, 20 miles; and IPLA, 15 miles. A transport cost of $.25 per mile was used. The average number of pigs sold per lot in all markets was estimated by farm advisers in these counties as being about 35 head. It was assumed that transport costs did not increase as pigs became heavier.

Table 9. — Weighted Average Prices for Feeder Pigs in Three Alternative Market Channels, by Month, Breed, Weight, and Lot Size (1964 base)

Weight group (pounds)	1–25 head per lot		26–50 head per lot		51–75 head per lot		76–100 head per lot		Over 100 head per lot	
	Hampshire	Other breeds	Hampshire	Other breeds	Hampshire	Other breeds	Hampshire	Other breeds	Hampshire	Other breeds
Albion — December through March (dollars per head)										
25–40	11.52	11.30	11.91	11.61	12.32	12.10	11.98	11.76	12.36	12.14
41–55	13.67	13.37	14.20	13.90	14.76	14.46	14.30	14.00	14.81	14.51
56–70	15.24	14.85	15.93	15.54	16.67	16.28	16.05	16.66	16.73	16.34
71–85	16.75	16.26	17.62	17.13	18.53	18.04	17.78	17.29	18.61	18.12
86–100	18.48	17.90	19.52	18.94	20.62	20.04	19.72	19.14	20.71	20.13
Over 100	21.82	21.08	23.13	22.39	24.51	23.77	23.38	22.64	24.63	23.89
Albion — April through May (dollars per head)										
25–40	12.63	12.41	13.02	12.80	13.44	13.20	13.10	12.88	13.47	13.25
41–55	15.18	14.88	15.71	15.41	16.27	15.97	15.81	15.51	16.32	16.02
56–70	17.21	16.82	17.91	17.52	18.64	18.25	18.04	17.65	18.70	18.31
71–85	19.21	18.72	20.08	19.59	20.99	20.50	20.24	19.75	21.07	20.58
86–100	23.51	22.93	22.47	21.89	23.56	22.98	22.66	22.08	23.66	23.08
Over 100	25.54	24.80	26.85	26.11	28.23	27.49	27.11	26.37	28.35	27.61
Albion — June through August (dollars per head)										
25–40	11.52	11.30	11.91	11.69	12.32	12.10	11.98	11.76	12.36	12.14
41–55	13.67	13.37	14.20	13.90	14.76	14.46	14.30	14.00	14.81	14.51
56–70	15.24	14.85	15.93	15.54	16.67	16.28	16.05	16.66	16.73	16.34
71–85	16.75	16.26	17.62	17.13	18.53	18.04	17.78	17.29	18.61	18.12
86–100	18.48	17.90	19.52	18.94	20.62	20.04	19.72	19.14	20.71	20.13
Over 100	21.82	21.08	23.13	22.39	24.51	23.77	23.38	22.64	24.63	23.89
Albion — September through October (dollars per head)										
25–40	12.10	11.88	12.50	12.28	12.91	12.69	12.57	12.35	12.94	12.72
41–55	14.47	14.17	15.00	14.70	15.56	15.26	15.10	14.80	15.60	15.30
56–70	16.28	15.89	16.97	16.58	17.70	17.31	17.10	16.71	17.77	17.38
71–85	18.04	17.55	18.91	18.42	19.82	19.33	19.07	18.58	19.90	19.41
86–100	20.03	19.45	21.07	20.49	22.16	21.58	21.26	20.68	22.26	21.68
Over 100	23.74	23.00	25.09	24.35	25.93	25.19	25.33	26.47	26.58	25.84
Albion — November (dollars per head)										
25–40	12.63	12.41	13.02	12.80	13.44	13.20	13.10	12.88	13.47	13.25
41–55	15.18	14.88	15.71	15.41	16.27	15.97	15.81	15.51	16.32	16.02
56–70	17.21	16.82	17.91	17.52	18.64	18.25	18.04	17.65	18.70	18.31
71–85	19.21	18.72	20.08	19.59	20.99	20.50	20.24	19.75	21.07	20.58
86–100	23.51	22.93	22.47	21.89	23.56	22.98	22.66	22.08	23.66	23.08
Over 100	25.54	24.80	26.85	26.11	28.23	27.49	27.11	26.37	28.35	27.61
Benton — December through March (dollars per head)										
25–40	11.45	11.33	11.94	11.72	12.08	11.86	12.09	11.86	12.24	12.02
41–55	13.60	13.36	14.27	13.77	14.46	14.16	14.47	14.17	14.67	14.37
56–70	15.24	14.85	15.93	15.54	16.67	16.28	16.05	16.66	16.73	16.34
71–85	16.88	16.39	17.76	17.47	18.27	17.78	18.29	17.80	18.62	18.13
86–100	17.81	17.23	19.10	18.52	19.48	18.90	19.49	18.91	19.89	19.31
Over 100	20.32	19.58	21.95	21.21	22.42	21.68	22.44	21.70	22.95	22.21
Benton — April through May (dollars per head)										
25–40	12.26	12.04	12.75	12.53	12.89	12.67	12.90	12.68	13.04	12.82
41–55	14.70	14.40	15.37	15.07	15.56	15.26	15.57	15.27	15.77	15.47
56–70	16.66	16.27	17.52	17.13	17.77	17.38	17.78	17.39	18.05	17.66
71–85	18.68	18.19	19.86	19.27	20.07	19.58	20.08	19.59	20.42	19.93
86–100	19.96	19.38	21.26	20.67	21.63	21.05	21.64	21.06	22.04	21.46
Over 100	23.03	22.29	24.66	23.92	25.13	24.39	25.16	24.42	25.66	24.92

(Concluded on next page)

Table 9. — Continued

Weight group (pounds)	1–25 head per lot		26–50 head per lot		51–75 head per lot		76–100 head per lot		Over 100 head per lot	
	Hampshire	Other breeds	Hampshire	Other breeds	Hampshire	Other breeds	Hampshire	Other breeds	Hampshire	Other breeds
Benton — June through October (dollars per head)										
25–40.....	11.45	11.33	11.94	11.72	12.08	11.86	12.09	11.86	12.24	12.02
41–55.....	13.60	13.36	14.27	13.77	14.46	14.16	14.47	14.17	14.67	14.37
56–70.....	15.21	14.82	16.08	15.69	16.33	15.94	16.34	15.95	16.61	16.22
71–85.....	16.88	16.39	17.76	17.47	18.27	17.78	18.29	17.80	18.62	18.13
86–100....	17.81	17.23	19.10	18.52	19.48	18.90	19.49	18.91	19.89	19.31
Over 100..	20.32	19.58	21.95	21.21	22.42	21.68	22.44	21.70	22.95	22.21
Benton — November (dollars per head)										
25–40.....	12.26	12.04	12.75	12.53	12.89	12.67	12.90	12.68	13.04	12.82
41–55.....	14.70	14.40	15.37	15.07	15.56	15.26	15.57	15.27	15.77	15.47
56–70.....	16.66	16.27	17.52	17.13	17.77	17.38	17.78	17.39	18.05	17.66
71–85.....	18.68	18.19	19.86	19.27	20.07	19.58	20.08	19.59	20.42	19.93
86–100....	19.96	19.38	21.26	20.67	21.63	21.05	21.64	21.06	22.04	21.46
Over 100..	23.03	22.29	24.66	23.93	25.13	24.39	25.16	24.42	25.66	24.92

IPLA (One price for all breeds and lot sizes; dollars per head)

	January–February	March–May	June	July–August	September–October	November–December
25–40.....	12.48	13.11	12.09	12.96	12.79	12.09
41–55.....	15.23	16.10	14.70	15.89	15.66	14.70
56–70.....	16.75	17.88	16.03	17.62	17.31	16.03
71–85.....	18.47	19.88	17.56	19.54	19.16	17.56
86–100.....	20.17	21.86	19.09	21.46	21.00	19.09
Over 100.....	22.88	25.00	21.51	24.50	23.93	21.51

market channel. Table 9 shows price variations for each of these variables. Prices received for each lot of pigs sold between 1962 and 1964 were adjusted to the 1964 price level. The probability of receiving a particular price was calculated from the number of times each price appeared. From this data, a weighted average price was computed for all combinations of breed,[1] lot size, weight, month of sale, and marketing channel. By subtracting the costs of marketing and production associated with each combination of these variables, a producer can obtain an economic basis for selecting the best market channel. If it is possible to identify non-economic factors, such as flexibility and management assistance, they may be included in the decision. The "cost of production and marketing" row in Table 8 may be used as a basis for figuring costs. Additional costs may be added or the estimates changed where the individual producer has this information.

[1] The only breed designation which consistently received a price premium was Hampshires. This category included all pigs with Hampshire characteristics.

Costs and decisions in purchasing and feeding feeder pigs

The analysis of prices in the preceding section has relevance for buyers as well as sellers of feeder pigs. Seasonal price patterns and the effects of breed, weight, and lot size are important factors to consider when purchasing feeder pigs.

Although not evident in the statistical analysis, the price which a buyer can pay is dependent upon his estimates of the costs and returns from feeding pigs. Profitability of the feeding enterprise depends upon: (1) the price of corn to be fed, (2) the price of butcher hogs at the

Table 10. — Estimated Maximum Price That Farmers Can Pay for 50-Pound Feeder Pigs and Still Recover All Direct Costs of Production[a]

Corn price[b]	Expected net selling price of 225-pound market hogs	Price per head when level of feeding efficiency is: (pounds of feed per 100 pounds of gain)[c]		
		350	400	450
(per bushel)	(per 100 pound)			
$ .90	$11.00	$ 9.80	$ 7.90	$ 5.90
	12.00	11.90	10.00	8.10
	13.00	14.10	12.20	10.20
	14.00	16.20	14.30	12.40
	15.00	18.40	16.40	14.50
	16.00	20.50	18.60	16.60
	17.00	22.70	20.70	18.80
1.00	12.00	11.00	9.00	6.90
	13.00	13.20	11.10	9.10
	14.00	15.30	13.20	11.20
	15.00	17.40	15.40	13.40
	16.00	19.50	17.50	15.50
	17.00	21.70	19.70	17.70
	18.00	23.90	21.80	19.80
1.10	14.00	14.40	12.20	10.00
	15.00	16.60	14.40	12.20
	16.00	18.70	16.50	14.30
	17.00	20.80	18.60	16.50
	18.00	23.00	20.80	18.60
	19.00	25.10	22.90	20.80
	20.00	27.30	25.10	22.90
1.20	16.00	17.80	15.40	13.10
	17.00	19.90	17.60	15.30
	18.00	22.00	19.70	17.40
	20.00	26.30	24.00	21.70
	22.00	30.60	28.30	26.00
	24.00	34.90	32.60	30.30
	26.00	39.20	36.90	34.60
	28.00	43.50	41.20	38.90

[a] R. A. Hinton, A. G. Mueller, D. E. Walker, "Economics for Agriculture," F.M.4, January, 1960, Department of Agricultural Economics, University of Illinois.
[b] Protein price assumed to be 4.5 cents per pound for all corn price levels.
[c] The net return over feed and other costs per head, rounded to the nearest 10 cents.

date the pigs are ready for market, (3) the price of feeder pigs, and (4) the efficiency of the pigs in converting corn to pork.

Table 10 shows the maximum price that a farmer can pay for a 50-pound feeder pig and still recover all direct costs. Alternative feeder pig prices are computed for four levels of corn prices, three levels of feeding efficiency, and a range of prices for 225-pound butcher hogs. One of the important relationships shown in this table is the effect of feeding efficiency upon the price that can be paid for feeder pigs. Improved management and quality of pigs can compensate for a large increase in the price of feed or a decrease in the price of market hogs. Marketing efficiency and production efficiency are equally important in determining the opportunity for profits in finishing feeder pigs.

Proposed Adjustments in the Marketing System of the 8-County Area

Although the following recommendations are made specifically for the 8-county region, nearly all marketing institutions are faced with problems similar to the ones identified in this study. The suggestions are, therefore, important considerations for any firm handling feeder pigs and in many cases indicate other activities which these agencies should consider.

Coordinated area approach

While there is some communication and coordination among the three major outlets for feeder pigs in the region, it needs to be strengthened. Perhaps a first step might be to form an advisory committee. The farm adviser and a local feeder pig producer selected by the extension council might be the representatives from each county.

There appear to be possibilities for some further expansion in both the auction and contract programs in this area. The committee might function to bring about this expansion in an orderly manner and maintain contact with both auctions and IPLA. An initial activity might be to help coordinate the two auctions' sale dates, publicity, and advertising. Further steps might be taken in providing uniformity of auction procedures.

The committee might also function in determining if further expansion of auction operations is desirable and necessary. Should expansion occur, they might assist in determining locations and procedures. If further expansion does occur, this committee might be the forerunner of a formal organization to manage the auctions in the area and maintain contact with the contract program.

Effective management and adequate amounts of competent labor are essential to the success of the auctions. By coordinating the area activities, it might ultimately be possible to have a single manager for the area auctions.

Quality improvement programs

Local farm advisers can and will continue to provide the basic educational effort toward improvement. If a regional effort is undertaken, several farm advisers could coordinate their efforts to develop feeder pig educational activities that center around market outlets rather than on a county basis.

An initial activity to better identify quality problems could be a postcard survey. Each buyer should be provided a card at the time of sale with which to evaluate the pigs at the end of the first week. A second card should be sent to these buyers near the time the finished hogs will be marketed. This card should solicit information on feeding qualities, rate of gain during the feeding period, and any information available on grades or cut-out value of the finished hogs. Follow-up letters will be required for both of these cards and perhaps an additional letter explaining the importance of this information to the buyer as well as the seller. The information obtained should be made available to individual producers who sold the pigs and, in summary form, to all feeder pig producers.

As progress is made in size of lots of pigs sold, efforts could be made to sell more one-owner lots. Perhaps buyers would be willing to accept greater weight variations in such lots.

Another possibility also might be to maintain some standards on breeding stock and to pool the lots from superior breeding stock in a "select" group.

Continuous program of evaluation

Continuous evaluation of area production and marketing might be handled by a regional committee, or, lacking this, farm advisers and directors from the established outlets might work together. Such evaluation should include changes in production in the region. Changes in feed supply and the number of pigs fed out relative to sales of feeder pigs are other factors. Location of markets as indicated by the location of buyers is very important. New innovations in marketing techniques and facilities, such as Tel-O-Auction, need continuing appraisal.

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